

Nano-Scale Strike-Position-Dependent Frequency-Shift Prisms for Optical Transistor Functionality with Ability to Handle Large Supra-Binary Values

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Of usefulness would be a transistor architecture, preferably of an optical nature, which would allow both for the transport of data at light-speed, the handling of large values well-beyond binary “on” and “off” states and operation at room temperature. Various types of bespoke processors have been developed, each of which feature their own attributes and pitfalls.

An optical structure which could be termed a frequency-multiplexing prism, which is already well-respected for its value in LiDAR systems (single-mode light introduced to the prism is altered in its frequency uniquely depending upon which part of the prism is transited so that no single frequency is projected along more than a single vector,) could be applied to processing applications, as well.

In an optical processor architecture, if we begin with single-mode light, we might use doped fiber to change the trajectory of this light in the distance between transistors by using an optical emission system running alongside the fibers like a sheath. The semiconductor dopant would project its own magnetic field which would vary depending upon the intensity of the light interacting with it, this light being in the IR range and not operating at a frequency which would interfere with the processor’s functionality through crosstalk. The intensity of this light would dictate how light in the primary pathway would be modified in terms of its frequency as a given deviation to angular momentum would, with multiplexing prisms being used as transistors, result in the direct conversion of the single-mode light into light of another, distinct frequency which could have hundreds of distinct values depending upon the precise path the light took through the prism. A waveguide would be used to re-set the angular momentum to “center” after light passed through each prismatic transistor.

The results of prior computational steps could be fermionically relayed to the optical angular control sheaths in order to perform further computational steps without introducing any undue bottlenecks to performance.